ABSTRACT

A motor includes (a) a cylindrical frame made of ferromagnetic material, (b) a pipe fitted in and disposed within the frame concentrically, (c) a sintered bearing press-fitted into the pipe, (d) a cylindrical magnet fixed on an outer wall of the pipe at an inner wall of the magnet, and (e) a cylindrical coil facing the magnet via an annular space, where the frame and the pipe are welded at a fitted section therebetween. This structure allows the motor to withstand a strong enough shock. An apparatus requiring a vibration motor can employ this motor having a large vibrator, so that great vibrations are available for the apparatus. As a result, the apparatus — utilizing the great vibrations as various functions — is obtainable.